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STANDARDS

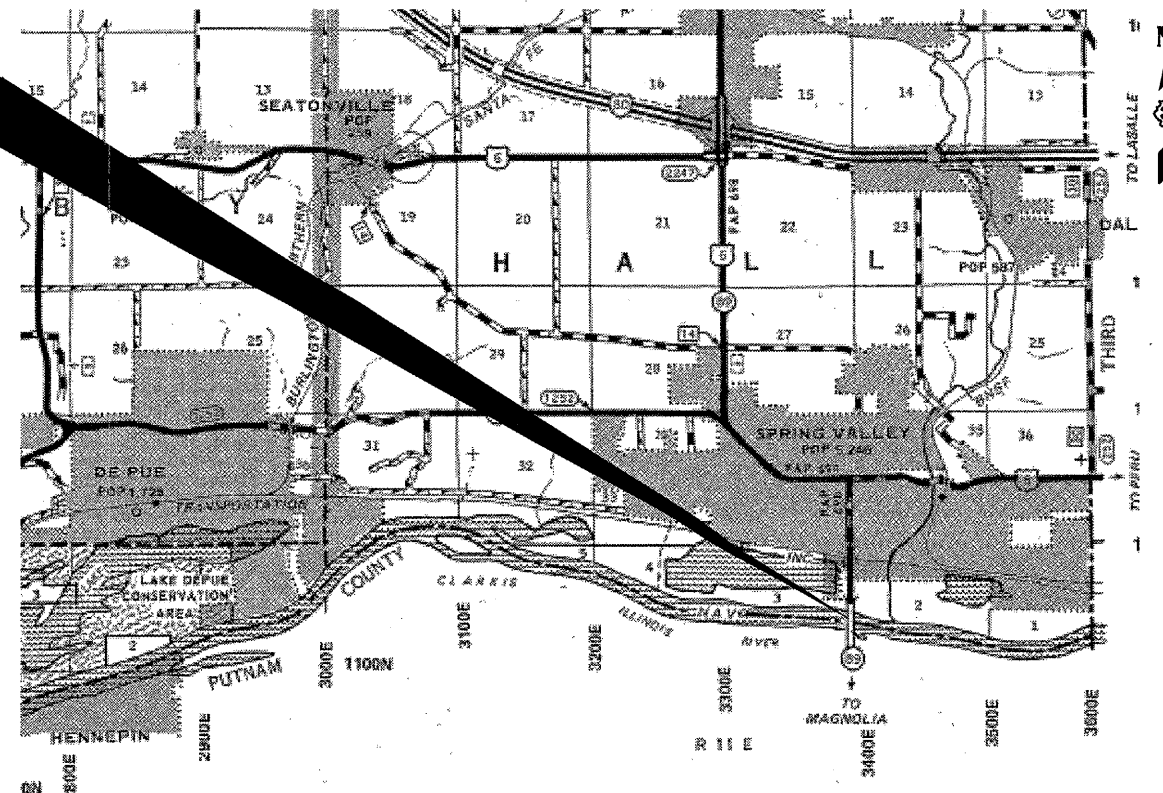
- | | |
|-----------|--|
| 000001-05 | STANDARD SYMBOLS, ABBREVIATIONS AND PATTERNS |
| 001001-01 | AREAS OF REINFORCEMENT BARS |
| 001006 | DECIMAL OF AN INCH AND OF A FOOT |
| 701001-01 | OFF-ROAD OPERATIONS 2L, 2W, MORE THAN 4.5 m (15') AWAY |
| 701006-02 | OFF-ROAD OPERATIONS 2L, 2W, 4.5 m (15') TO 600 mm (24") FROM PAVEMENT EDGE |
| 701201-02 | LANE CLOSURE, 2L, 2W, DAY ONLY, FOR SPEEDS P 45 MPH |
| 701301-02 | LANE CLOSURE, 2L, 2W, SHORT TIME OPERATIONS |
| 701901 | TRAFFIC CONTROL DEVICES |

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PROPOSED
HIGHWAY PLANS

FAP ROUTE 698 (IL 89)
SECTION (1B-D)I-2

PUTNAM
C-93-084-07
STRUCTURAL STEEL REPAIR

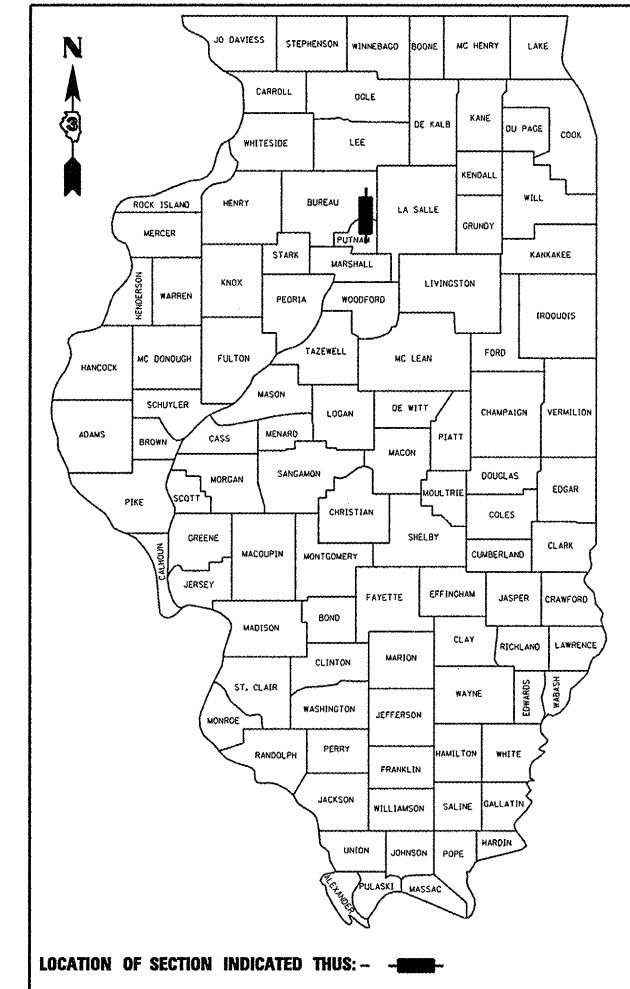
PROJECT LOCATION
SN 078-0006
FAP 698 (IL 89) OVER THE ILLINOIS RIVER
1.0 MILES SOUTH OF IL ROUTE 6 (SPRING VALLEY)



LOCATION MAP
 NOT TO SCALE
 POINT LOCATION

F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	(1B-D)I-2	PUTNAM	8	1
FED. ROAD DIST. NO.	ILLINOIS	CONTRACT NO. 66727		

D-93-002-08



LOCATION OF SECTION INDICATED THIS: - - -

FUNCTIONAL CLASSIFICATION

RURAL MINOR ARTERIAL

F.A.P. ROUTE 689 (IL 89)

2007 ADT = 5700

P.V. = 92.1% M.U. = 2.2% S.U. = 5.7%

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

SUBMITTED **3125 20 08**

George E. Ryan
 DEPUTY DIRECTOR OF HIGHWAYS, REGION ENGINEER

Eric E. Harm
 Intern ENGINEER OF DESIGN AND ENVIRONMENT

Christine M. Reed
 DIRECTOR OF HIGHWAYS, CHIEF ENGINEER

PRINTED BY THE AUTHORITY
OF THE STATE OF ILLINOIS

MICROFILMED _____
 REEL NUMBER _____
 AWARDED _____
 RESIDENT ENGINEER _____
 AS BUILT CHANGES WERE MADE
 ON THE FOLLOWING SHEETS _____

J.U.L.I.E.
JOINT UTILITY LOCATION INFORMATION FOR EXCAVATION
1-800-892-0123

DISTRICT 3 NO. (815) 434-6131

PROJECT ENGINEER: JOE KANNEL
UNIT CHIEF: RON WOODSHANK

CONTRACT NO. 66727

GENERAL NOTES

ANY REFERENCE TO A STANDARD IN THESE PLANS SHALL BE INTERPRETED TO MEAN THE EDITION AS INDICATED BY THE SUBNUMBER LISTED ON THE INDEX OF SHEETS OR THE COPY OF THE STANDARD INCLUDED IN THESE PLANS.

FOR STABILIZATION, ALL TYPE III BARRICADES SHALL REQUIRE A MINIMUM OF FOUR SAND BAGS PER BARRICADE.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING UTILITY PROPERTY FROM CONSTRUCTION OPERATIONS AS OUTLINED IN ARTICLE 107.31 OF THE STANDARD SPECIFICATIONS. THE "JULIE" NUMBER IS 1-800-892-0123. A MINIMUM OF FORTY-EIGHT (48) HOURS ADVANCE NOTICE IS REQUIRED.

WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL MONUMENTS UNTIL AN AUTHORIZED SURVEYOR OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR REESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS.

DATE: 3-25-08

PREPARED BY: [Signature]
DISTRICT STUDIES & PLANS ENGINEER

EXAMINED BY: [Signature]
DISTRICT CONSTRUCTION ENGINEER

[Signature]
DISTRICT MATERIALS ENGINEER

[Signature]
DISTRICT OPERATIONS ENGINEER

FILE NAME =	USER NAME = woodshankr1	DESIGNED - RW	REVISED - ---
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PLOT DATE = Mar 07, 2008 - 06:58:13 AM			

**STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION**

GENERAL NOTES

SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. 48+87.20 TO STA. 66+62.80

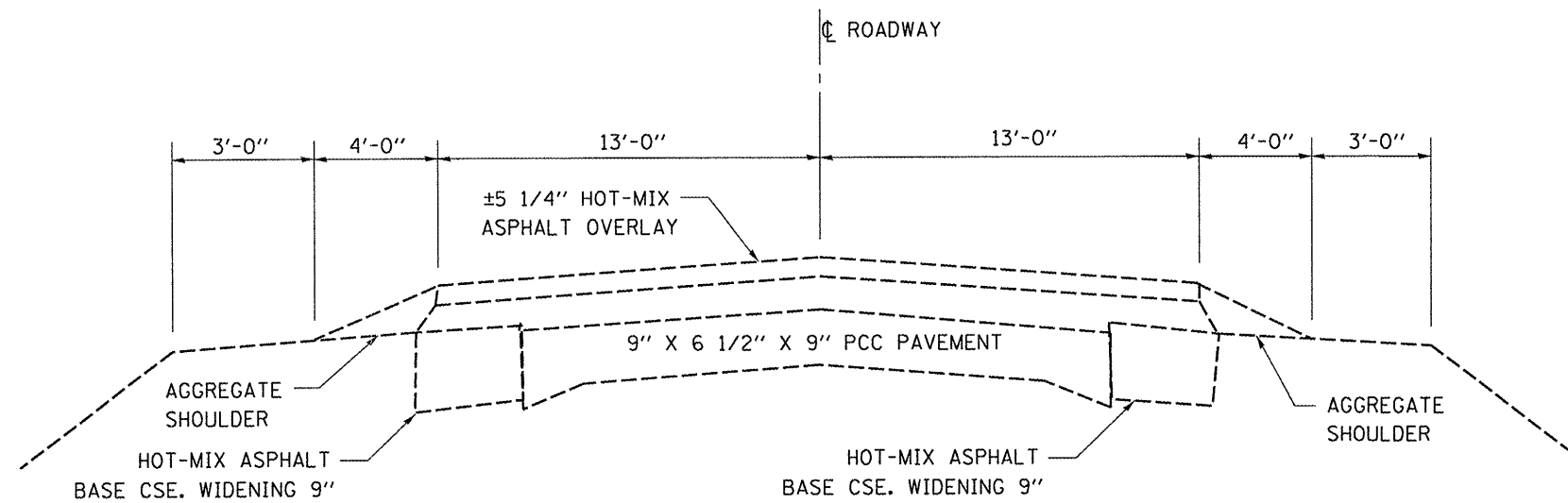
F.A.P. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
698	(1B-D1)-2	BUREAU/PUTNAM	8	2
FED. ROAD DIST. NO. - ILLINOIS FED. AID PROJECT CONTRACT NO. 66727				

SUMMARY OF QUANTITIES

CONSTRUCTION CODE TYPE:

SFTY-2A
100% STATE

CODE NO.	ITEM	UNIT	TOTAL QUANTITY
50501130	STRUCTURAL STEEL REPAIR	POUND	140
67100100	MOBILIZATION	L SUM	1
70100450	TRAFFIC CONTROL AND PROTECTION, STANDARD 701201	L SUM	1



TYPICAL SECTION

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STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

SUMMARY OF QUANTITIES

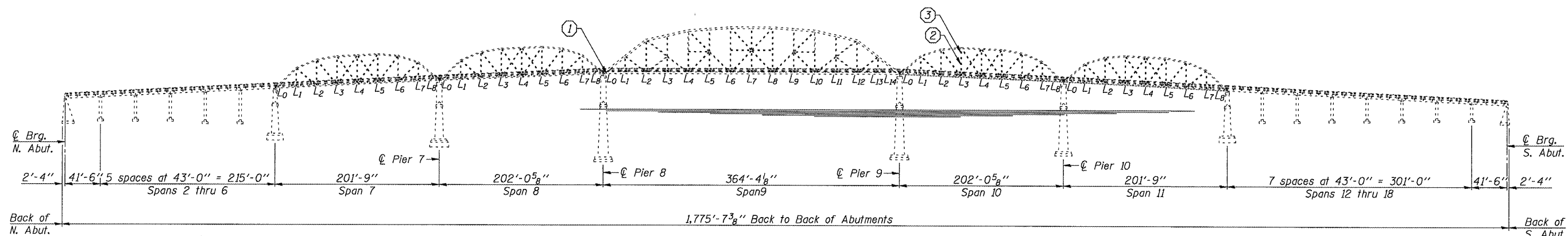
SCALE: _____ SHEET NO. 1 OF 1 SHEETS STA. 48+87.20 TO STA. 66+62.80

F.A.P. RTE. 698	SECTION (1B-D)-2	COUNTY BUREAU/PUTNAM	TOTAL SHEETS 8	SHEET NO. 4
FED. ROAD DIST. NO. - ILLINOIS			FED. AID PROJECT	
CONTRACT NO. 66727				

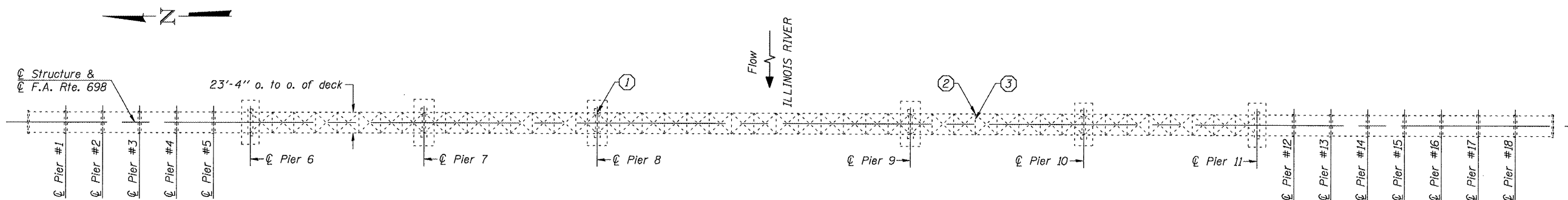
STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 698 (IL 89)	(IB-D) 1-2	BUREAU/ PUTNAM	8	5
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 66727		

SHEET NO. 1
OF 4 SHEETS



ELEVATION



PLAN

GENERAL NOTES

All structural steel shall conform to AASHTO Classification M-270 Gr. 36, unless otherwise noted.

Plan dimensions and details relative to existing plans are subject to routine variations. The Contractor shall field verify existing dimensions and details affecting new construction and make necessary approved adjustments prior to construction or ordering of materials. Such variations shall not be cause for additional compensation for a change in scope of the work, however, the Contractor will be paid for the quantity actually furnished based upon the unit price bid for the work.

Existing structural steel that will be in contact with new structural steel shall be cleaned and painted prior to erection as required by the Special Provision "Cleaning and Painting Contact Surface Areas of Existing Structural Steel Structures".

The existing structural steel coating contains lead. The Contractor shall take appropriate precautions to deal with the presence of lead on this project.

The inorganic zinc rich primer/acrylic/acrylic paint system shall be used for shop and field painting of new structural steel except where otherwise noted. The color of the acrylic finish coat shall be Interstate Green, Munsell No. 7.5G 4/8. See Special Provision "Cleaning and Painting New Metal Structures".

Cost of removal and/or re-installation of all members necessary to complete the work as detailed on the plans and as specified in the Special Provisions shall be included in the cost of Structural Steel Repair.

All new fasteners shall be 7/8" dia. or 3/4" dia. High Strength Bolts.

No field welding is permitted.

REPAIRS LEGEND

- ① Remove and replace bottom Batten Plate at Panel Point L₀ of Lower Chord of East Truss/Span 9. (See Sheet 2 of 4)
- ② Remove and replace Lacing Bars and grind existing welds to remove cracks in weld material and base metal of Vertical at U₃L₃ of East Truss/Span 10. (See Sheet 3 of 4)
- ③ Repair cracked Diagonal Bracing Angles over north bound lane between truss Verticals U₃L₃ of Span 10. (See Sheet 4 of 4)

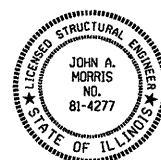
TOTAL BILL OF MATERIAL

ITEM	UNIT	QUANTITY
Structural Steel Repair	Pound	140
Traffic Control	L. Sum	1

GENERAL PLAN AND ELEVATION
SPRING VALLEY BRIDGE OVER ILLINOIS RIVER
F.A.P. 698 (IL 89) SEC. (IB-D)I-2
BUREAU/PUTNAM COUNTIES
S.N. 078-0006

DESIGNED	J.A.M.	200
CHECKED	A.R.K.	EXAMINED
DRAWN	S.A.P.	PASSED
CHECKED	A.R.K. & J.A.M.	ENGINEER OF BRIDGES AND STRUCTURES

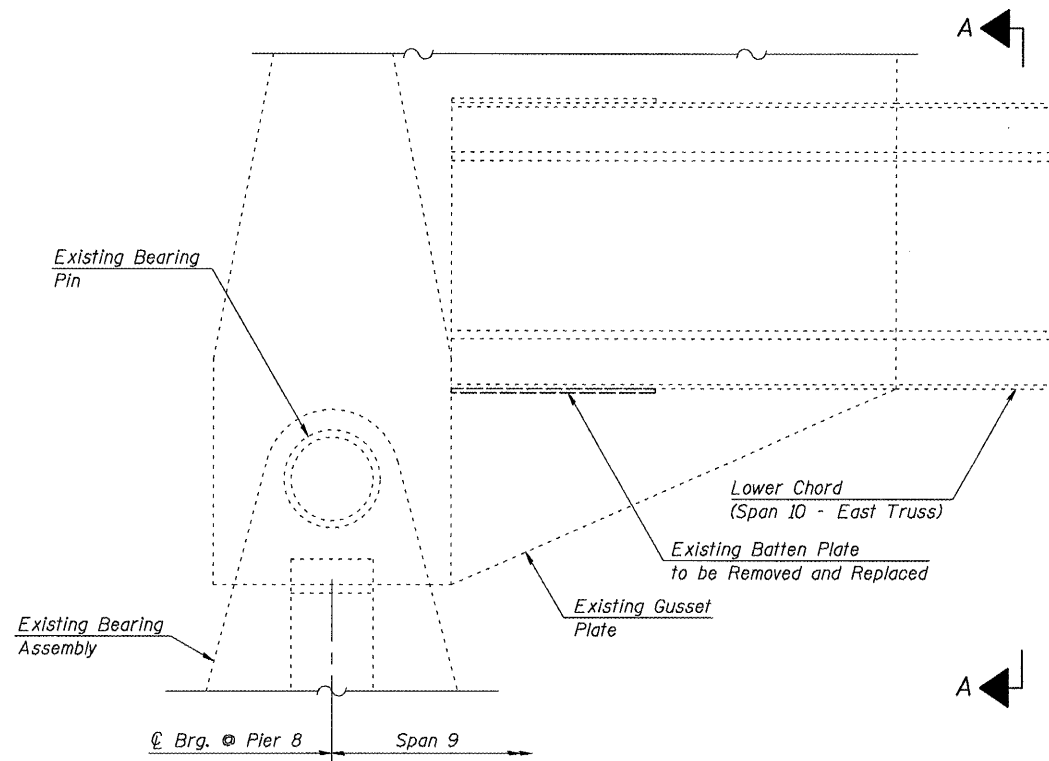
John A. Morris 4/8/08
ILLINOIS STRUCTURAL NO. 4277 (Expires 11/30/08)



STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

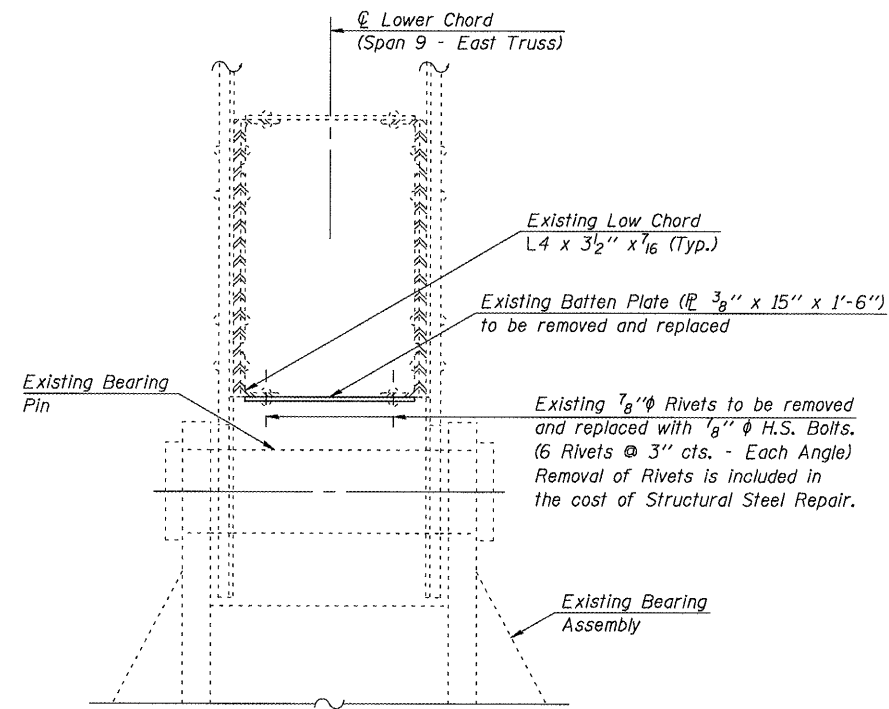
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FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 66727		

SHEET NO. 2
OF 4 SHEETS

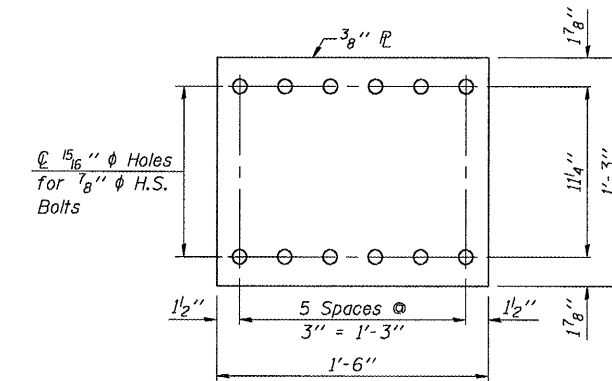


ELEVATION
(Looking East)

Note: Rivets not shown in this view.



SECTION A-A
(Looking North)



BATTEN PLATE DETAILS
Hole in Batten Plate shall be subpunched or subdrilled 13/16" phi and reamed in the field to 15/16" phi for 7/8" phi bolts.

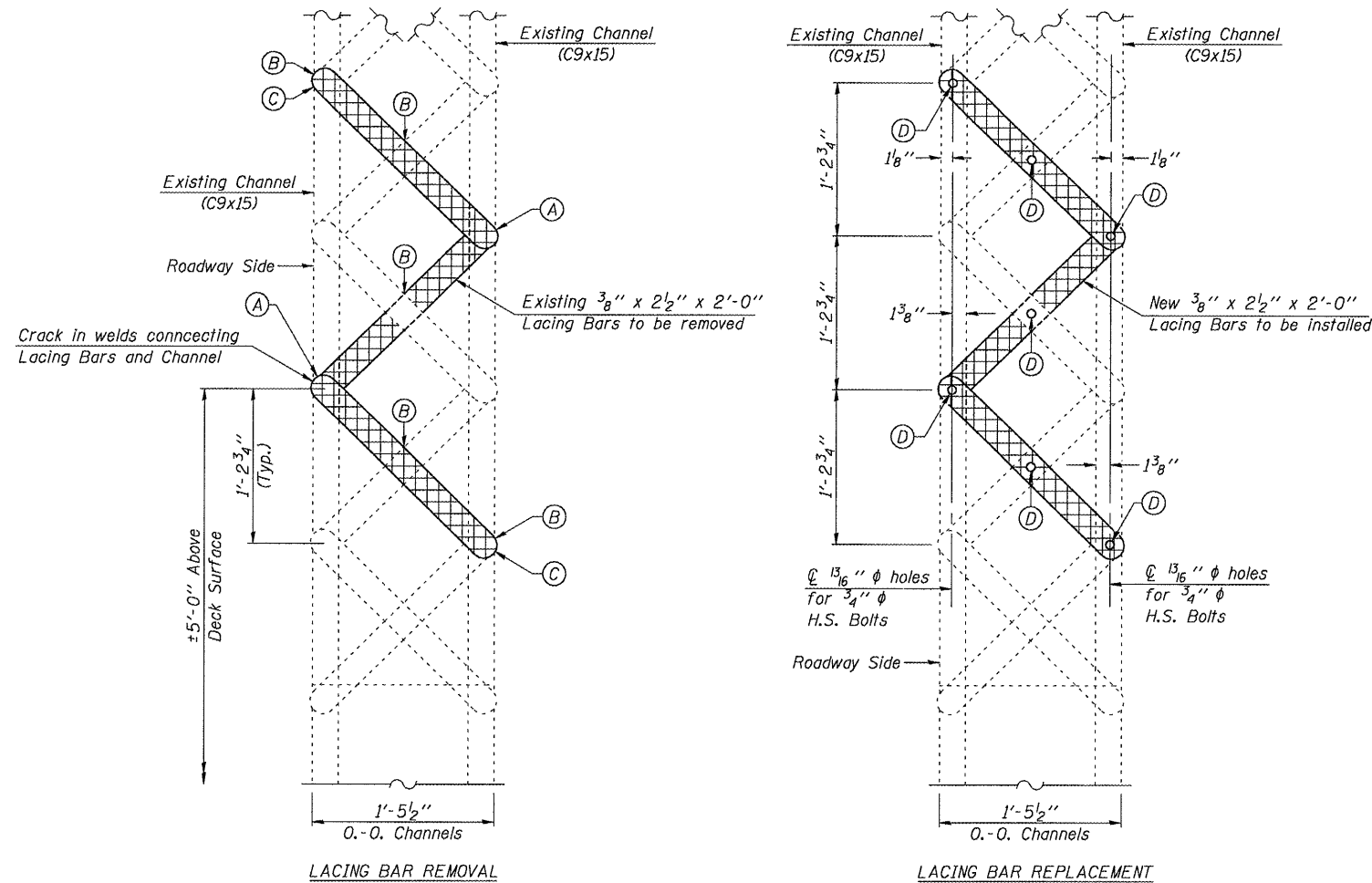
DESIGNED	J.A.M.	200
CHECKED	A.R.K.	EXAMINED
DRAWN	S.A.P.	PASSED
CHECKED	A.R.K. & J.A.M.	ENGINEER OF BRIDGES AND STRUCTURES

BATTEN PLATE REPAIR DETAILS
SPRING VALLEY BRIDGE OVER ILLINOIS RIVER
F.A.P. 698 (IL 89) SEC. (IB-D)I-2
BUREAU/PUTNAM COUNTIES
S.N. 078-0006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

ROUTE NO.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
FAP 698 (IL 89)	(IB-D) 1-2	BUREAU/ PUTNAM	8	7
FED. ROAD DIST. NO. 7		ILLINOIS	CONTRACT NO. 66727	

SHEET NO. 3
OF 4 SHEETS



LACING BAR REMOVAL LEGEND:

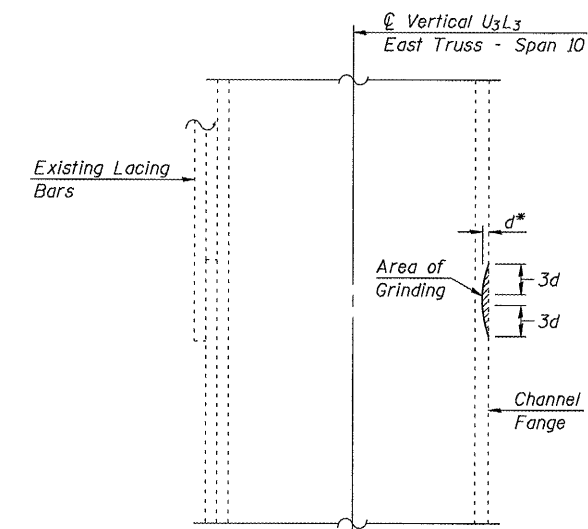
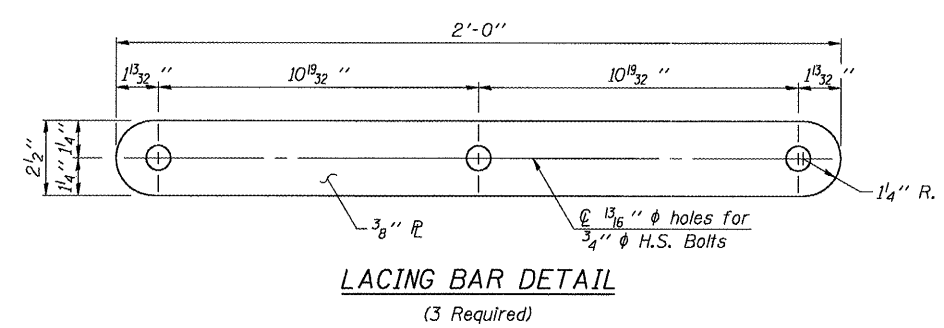
- (A) Remove the lacing bars and all weld material from the surface of the channel flange. All weld material at the location where the lacing bars were attached to the channel flange shall be removed by grinding. The grinding shall be sufficient to remove all cracks and defects in the surface of the channel section and should be done in a vertical direction parallel to the longitudinal axis of Vertical U₃L₃. The grinding shall provide a smooth transition from the deepest point of grinding to the original surface of the channel flange. After grinding, the surface shall be inspected using Magnetic Particle Testing to ensure that no cracking is present in the base metal of the channel section. If grinding to a depth of 1/8 inch is accomplished and cracks are identified in the base metal of the channel section, grinding operation shall be suspended and conditions reported to the Bureau of Bridges and Structures for further disposition.
- (B) The welds, connecting the lacing bars to be removed, to the lacing bars to remain, shall be removed by grinding. The grinding shall be sufficient to provide a flat and even contact surface to facilitate the installation of new lacing bars.
- (C) After the top lacing bar is removed, the weld material connecting the lower lacing bar to the channel section shall be ground to remove defects and inspected by Magnetic Particle Testing to verify that no cracks are present in the weld material or base metal of the channel section. If cracks are identified, the installation of new lacing bars and the drilling of bolt holes at the cracked location shall be suspended and conditions reported to the Bureau of Bridges and Structures for further disposition.
- (D) Using new lacing bars as a template, drill 13/16 inch dia. holes in existing lacing bars and channel flanges; connect lacing bars with 3/4 inch dia. H.S. bolts.

Notes: Cross hatching indicated lacing bars to be removed and replaced.

All existing lacing bars at Vertical U₃L₃ are welded to the vertical channel sections and to intersection lacing bars.

Cost of grinding and testing to ensure crack removal are included in the cost of Structural Steel Repair.

**LACING BAR RETROFIT AT
VERTICAL U₃L₃ - EAST TRUSS - SPAN 10**
(Looking North)
(Retrofit Applied Only to South Face of Vertical)



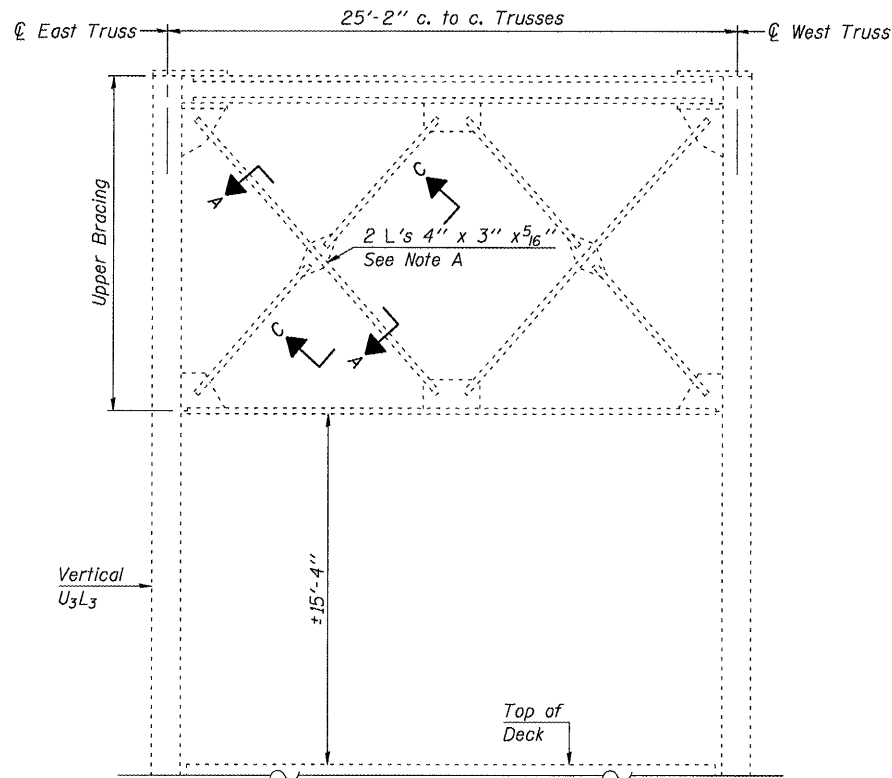
DESIGNED	J.A.M.	200
CHECKED	A.R.K.	EXAMINED
DRAWN	S.A.P.	PASSED
CHECKED	A.R.K. & J.A.M.	ENGINEER OF BRIDGES AND STRUCTURES

LACING BAR REPAIR DETAILS
SPRING VALLEY BRIDGE OVER ILLINOIS RIVER
F.A.P. 698 (IL 89) SEC. (IB-D)I-2
BUREAU/PUTNAM COUNTIES
S.N. 078-0006

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

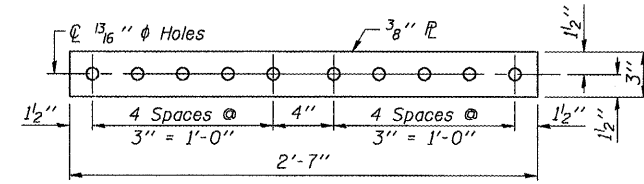
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FAP 698 (IL 89)	(IB-D) I-2	BUREAU/ PUTNAM	8	8
FED. ROAD DIST. NO. 7	ILLINOIS	CONTRACT NO. 66727		

SHEET NO. 4
OF 4 SHEETS

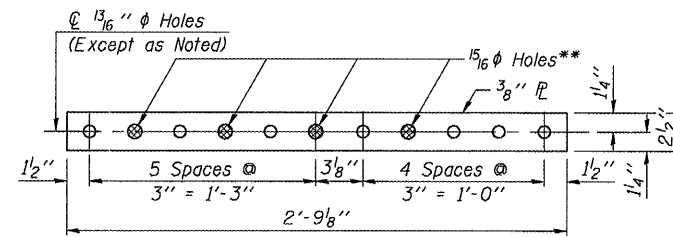


SECTION THRU SPAN 10 SHOWING DIAGONAL BRACING
NEAR VERTICAL U₃L₃
(Looking South)

Note "A": The horizontal leg of both existing angles (L4x3x5/16) are cracked for the total thickness and length of the outstanding horizontal leg.

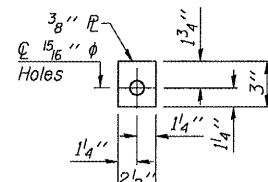


SPLICE PLATE "A"
(2 Required)

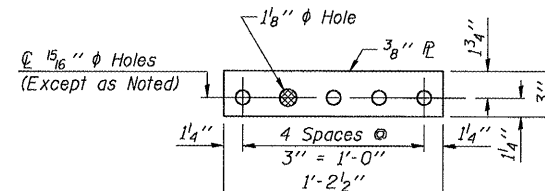


SPLICE PLATE "B"
(2 Required)

**15/16" φ holes in Splice Plate "B" shall be subpunched or subdrilled 13/16" φ and reamed in the field to 15/16" φ for 7/8" φ bolts.



FILL PLATE "C"
(1 Required)

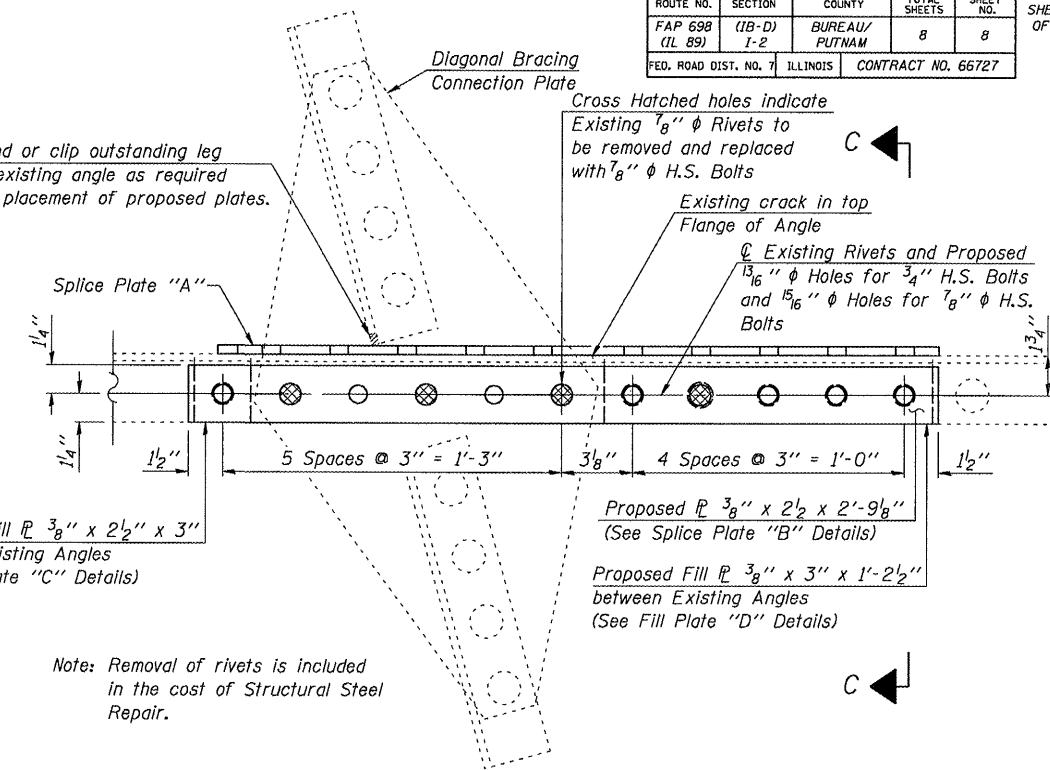


FILL PLATE "D"
(1 Required)

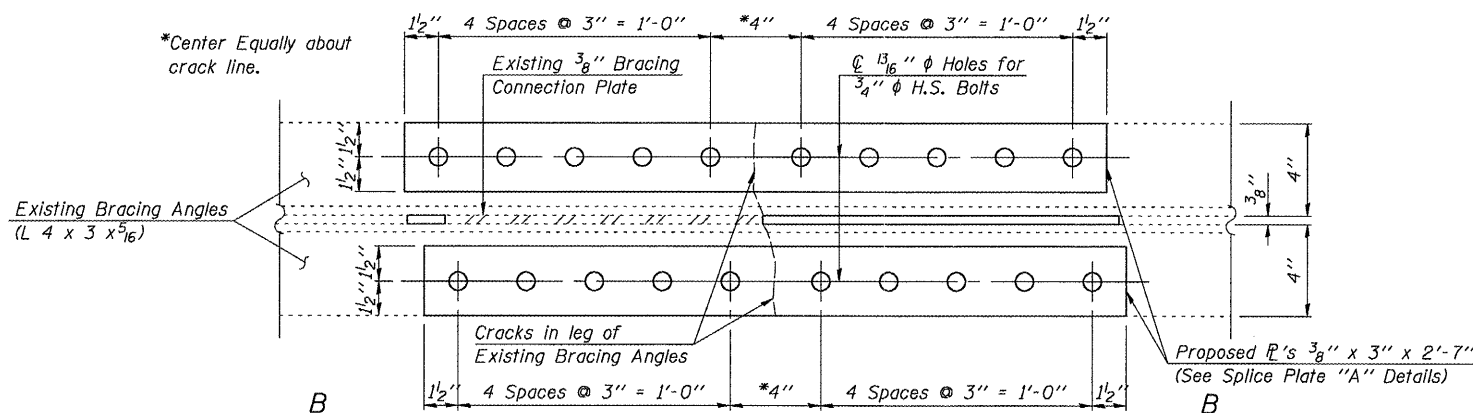
Grind or clip outstanding leg of existing angle as required for placement of proposed plates.

Proposed Fill PL 3/8" x 2 1/2" x 3" between Existing Angles (See Fill Plate "C" Details)

Note: Removal of rivets is included in the cost of Structural Steel Repair.

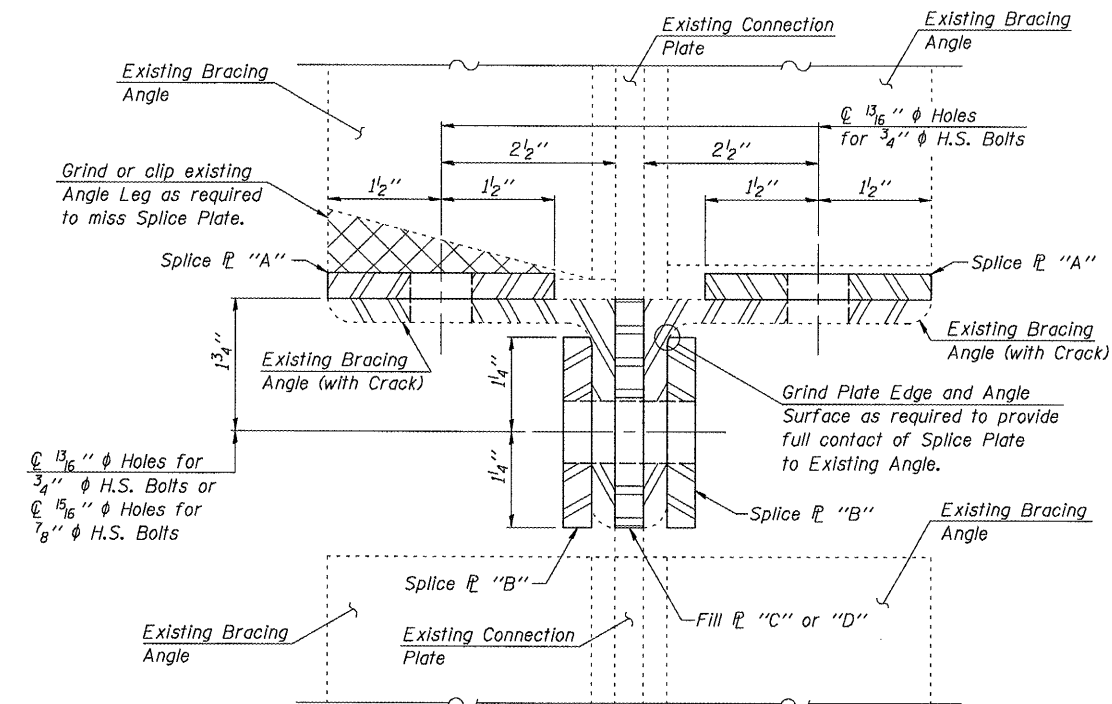


VIEW B-B
(Looking South)



SECTION A-A
(Looking Downward at Top of Angles of Diagonal Bracing)

(Splice Plates for vertical legs of Bracing Angles and Fill Plates between Bracing Angles not shown. See View B-B.)



SECTION C-C

BRACING REPAIR DETAILS
SPRING VALLEY BRIDGE OVER ILLINOIS RIVER
F.A.P. 698 (IL 89) SEC. (IB-D)I-2
BUREAU/PUTNAM COUNTIES
S.N. 078-0006

DESIGNED	J.A.M.	200
CHECKED	A.R.K.	ENGINEER OF BRIDGE DESIGN
DRAWN	S.A.P.	PASSED
CHECKED	A.R.K. & J.A.M.	ENGINEER OF BRIDGES AND STRUCTURES